

TURBINE ARRAY CONTROL SYSTEM

ABSTRACT OF THE DISCLOSURE

A Supervisory Command and Data Acquisition (SCADA) system for managing wind turbines for electric power generation. One implementation includes a SCADA element at each wind turbine, configured to collect data and provide an interface to control the turbine and communicate with other parts of the system; a SCADA element at a substation, configured to collect data from the substation, to communicate with other parts of the system, and to store substation data locally; a SCADA element at each meteorological site, configured to collect meteorological data from sensors on and at a meteorology tower, to communicate with other parts of the system, and to store meteorology data locally; a data communication network; a server coupled over the network with the wind turbines, the substation, and the meteorological sites through their respective the SCADA elements; and a user interface through which authorized users can exercise command and control functions.

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